

# isc Silicon NPN Power Transistor

# ISC2319

### DESCRIPTION

- High Voltage Capability
- High Current Capability
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

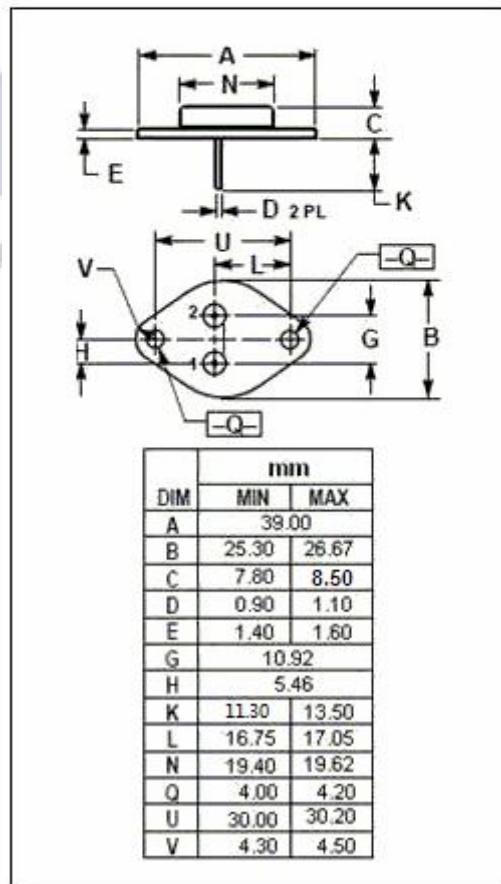
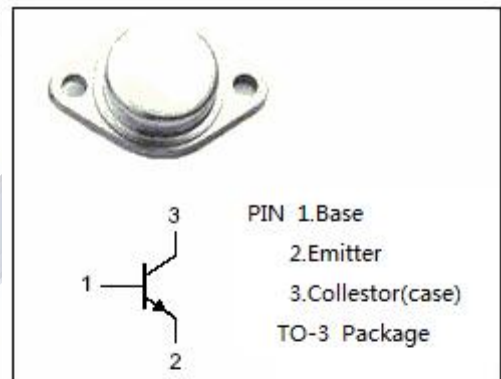
- Switching regulators
- Inverters
- Solenoid and relay drivers
- Motor controls
- Deflection circuits

### Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage	850	V
V <sub>CEO</sub>	Collector-Emitter Voltage	450	V
V <sub>EBO</sub>	Emitter-Base Voltage	6	V
I <sub>C</sub>	Collector Current-Continuous	15	A
I <sub>CM</sub>	Collector Current-Peak	20	A
I <sub>B</sub>	Base Current-Continuous	10	A
I <sub>BM</sub>	Base Current-peak	15	A
P <sub>C</sub>	Collector Power Dissipation @T <sub>C</sub> =25°C	175	W
T <sub>J</sub>	Junction Temperature	200	°C
T <sub>stg</sub>	Storage Temperature Range	-65~200	°C

### THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal Resistance, Junction to Case	1.0	°C/W



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**ELECTRICAL CHARACTERISTICS**

T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 50mA ; I <sub>B</sub> = 0	450		V
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 5A ; I <sub>B</sub> = 0.7A		2.5	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 10A; I <sub>B</sub> = 1.3A I <sub>C</sub> = 10A; I <sub>B</sub> = 1.3A; T <sub>C</sub> = 100°C		3.0 3.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 10A; I <sub>B</sub> = 1.3A I <sub>C</sub> = 10A; I <sub>B</sub> = 1.3A; T <sub>C</sub> = 100°C		1.5 1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> =850V; I <sub>E</sub> = 0 V <sub>CB</sub> =850V; I <sub>E</sub> = 0; T <sub>C</sub> =100°C		0.25 1.5	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 6V; I <sub>C</sub> = 0		1	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 15A ; V <sub>CE</sub> = 5V	5		